

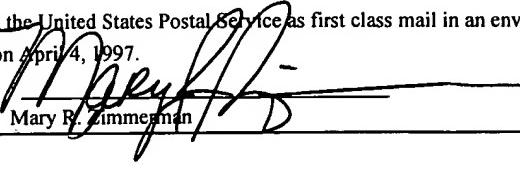


04/07/97

PATENT
Docket No. 203442107020

CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:
Assistant Commissioner for Patents, Washington, D.C. 20231, on April 4, 1997.


Mary R. Zimmerman
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

11

In the application of:

Vishva M. Dixit and Karen O'Rourke

Serial No.: 08/443,982

Filing Date: May 18, 1995

For: METHODS AND COMPOSITIONS FOR
REGULATING FAS-ASSOCIATED
APOPTOSIS

Examiner: D. Romeo

Group Art Unit: 1801

RECEIVED

MAR 21 1997

GROUP 1800

REQUEST TO WITHDRAW HOLDING OF ABANDONMENTAssistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

The undersigned is in receipt of a Notification of Abandonment mailed March 21, 1997, which states that the above referenced patent application is abandoned. There is no stated reason for the issuance of this Action. A copy of the Notice is attached.

For the reasons provided below, Applicants' undersigned attorney requests this Notice be withdrawn as erroneously issued.

An Office Action was issued by the United States Patent and Trademark Office on July 22, 1996, making the six-month statutory deadline for filing the response January 22, 1997. On January 17, 1997, a response and a Petition for a Three Month Extension of Time were filed. A copy of the postcard receipt for these documents is enclosed. The copy shows receipt of the pa-174028

response and accompanying papers on January 21, 1997. No further action was deemed necessary by Applicants' attorney.

An abandonment notice in this patent application does not seem appropriate due to the following:

1. in view of the petition for a three month extension of time along with the fee, the amendment filed in response to the July 22, 1996 Office Action was timely filed on January 17, 1997 and
2. the USPTO's receipt of the amendment was verified by the mail room's January 21, 1997 stamp on the return receipt postcard.

Withdrawal of the holding of abandonment is requested. Applicants respectfully request that examination of the application be continued on the basis of the enclosed response.

In accordance with 37 C.F.R. § 1.8 iii(B), enclosed is a copy of Applicants' prior response as it was filed on January 17, 1997.

The undersigned believes that the enclosed documentation provides an adequate basis as to why the present application should be revived without any additional fee being due. However, if any fee is deemed necessary, authorization is given to charge the amount of this fee to Deposit Account **03-1952** (Atty Dkt. 20344-21070.20). Do not hesitate to contact me directly as indicated below should you have any questions.

Respectfully submitted,

Dated: April 4, 1997

By:



Antoinette F. Konski
Registration No. 34,202

Morrison & Foerster, LLP
755 Page Mill Road
Palo Alto, California 94304-1018
Telephone: (415) 813-5730
Facsimile: (415) 494-0792

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MAR 25 1997

MORRISON & FOERSTER

71480 U.S. TO
04/07/97



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

08/443, 982

05/18/95

DIXIT

V

203442107020

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.

18M2/0321

ANTOINETTE F KONSKI
MORRISON AND FOERSTER
755 PAGE MILL ROAD
PALO ALTO CA 94304-1018

ROMEO, D

EXAMINER

1801

ART UNIT	PAPER NUMBER
	03/21/97

DATE MAILED:

NOTICE OF ABANDONMENT

This application is abandoned in view of:

- Applicant's failure to timely file a proper response to the Office letter mailed on _____.
- A response (with a Certificate of Mailing or Transmission of _____) was received on _____, which is after the expiration of the period for response (including a total extension of time of _____ month(s)) which expired on _____.
- A proposed response was received on _____, but it does not constitute a proper response to the final rejection.

(A proper response to a final rejection consists only of: a timely filed amendment which places the application in condition for allowance; a Notice of Appeal; or the filing of a continuing application under 37 CFR 1.62 (FWC).

- No response has been received.
- Applicant's failure to timely pay the required issue fee within the statutory period of three months from the mailing date of the Notice of Allowance.

- The issue fee (with a Certificate of Mailing or Transmission of _____) was received on _____.
- The submitted issue fee of \$_____ is insufficient. The issue fee required by 37 CFR 1.18 is \$_____.
- The issue fee has not been received.

- Applicant's failure to timely file new formal drawings as required in the Notice of Allowability.

- Proposed new formal drawings (with a Certificate of Mailing or Transmission of _____) were received on _____.
- The proposed new formal drawings filed _____ are not acceptable.
- No proposed new formal drawings have been received.

- The express abandonment under 37 CFR 1.62(g) in favor of the FWC application filed on _____.

- The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.

- The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a) upon the filing of a continuing application.

- The decision by the Board of Patent Appeals and Interferences rendered on _____ and because the period for seeking court review of the decision has expired and there are no allowed claims.

- The reason(s) below:

DOCKETED *Sfv*

71480 U.S. PTO



04/07/97

ATTORNEY DOCKET: 20344-21070.20 SERIAL NO.: 08/443,982 DATE: 1-17-97

INVENTOR(S): V.M. Dixit and K. O'Rourke

Atty/Secy: AFK/jlt

TITLE: METHODS AND COMPOSITIONS FOR REGULATING FAS-ASSOCIATED APOPTOSIS

Papers enclosed:

- 1) Amendment Transmittal (2 pages)
- 2) Petition For Extension of Time (2 pages)
- 3) Amendment and Response (12 pages)
- 4) Check in the amount of \$571.00

56163 U.S. PTO



01/21/97

Certificate of Mailing "By First Class Mail" dated 1-17-96

RECEIVED BY THE UNITED STATES PATENT AND TRADEMARK OFFICE



04/07/97

PATENT
Docket No. 203442107020

CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"

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Assistant Commissioner for Patents, Washington, D.C. 20231, on April 4, 1997.

Mary R Zimmerman

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Vishva M. Dixit and Karen O'Rourke

Serial No.: 08/443,982

Filing Date: May 18, 1995

For: METHODS AND COMPOSITIONS FOR
REGULATING FAS-ASSOCIATED
APOPTOSIS

Examiner: D. Romeo

Group Art Unit: 1801

RECEIVED

(MAR 21 1997)

GROUP 1800

TRANSMITTAL

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Enclosed please find the following:

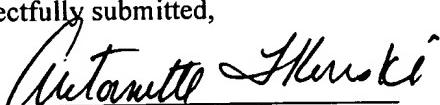
Request to Withdraw Holding of Abandonment; A copy of Notice of Abandonment, A copy of post card receipt of Response and Petition for Three Month Extension of Time receipt stamped by U.S. Patent and Trademark Office, A copy of Amendment and Response filed January 17, 1997; and post card receipt.

The Assistant Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16, 1.17, and 1.21 that may be required by this transmittal, or to credit any overpayment, to Deposit Account No. 03-1952.

Dated: April 4, 1997

Respectfully submitted,

By:


 Antoinette F. Konski
 Registration No. 34,202

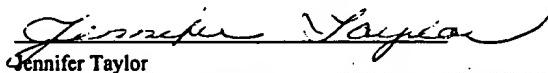
Morrison & Foerster LLP
 755 Page Mill Road
 Palo Alto, California 94304-1018
 Telephone: (415) 813-5730
 Facsimile: (415) 494-0792



04/07/97

PATENT
Docket No. 203442107020**CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:
Assistant Commissioner for Patents, Washington, D.C. 20231, on January 17, 1997.


Jennifer Taylor**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the application of:

V.M. Dixit & K. O'Rourke

Serial No.: 08/443,982

Filing Date: May 18, 1995

For: METHODS AND COMPOSITIONS FOR
REGULATING FAS-ASSOCIATED APOPTOSIS

Examiner: J. Curtis

Group Art Unit: 1812

**AMENDMENT AND RESPONSE TO OFFICE ACTION**

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

This paper is responsive to the Office Action dated July 22, 1996, issued in connection with the above-identified application. Enclosed herewith is a petition for a three-month extension of time and the appropriate fee making a response due January 22, 1997. Accordingly, this response is timely filed.

I. AMENDMENTS

Prior to examination of the following application, entry of the following amendments is respectfully requested.

In the Brief Description of the Drawings:

On page 3, line 23, please replace "(Seq. ID Nos. 1 and 2)" with --SEQ ID NO:1 and SEQ ID NO:2--.

On page 4, line 1, please replace "(Seq. ID Nos. 3 through 6)" with --(SEQ ID NO:3 (hFADD); SEQ ID NO:4 (rFas); SEQ ID NO:5 (hFas) and SEQ ID NO:6 (h-TNFR-1))--.

In the Detailed Description of the Invention:

On page 15, line 5, after "Figure 2B" insert --(SEQ ID NO:1)--.

On page 15, line 7, after "Figure 2A" insert --(SEQ ID NO:1)--.

On page 15, lines 10, 12, 18, 22, 23, 24 and 27, after "Figure 2A" insert --(SEQ ID NO:2)--.

On page 15, line 16, after "Figure 2A", please add --or from about amino acid 111 to about amino acid 180 in SEQ ID NO:2--.

On page 16, lines 2, 4, 5 and 16, after "Figure 2A" insert --(SEQ ID NO:2)--.

On page 16, line 27, after "Figure 2B" insert --(SEQ ID NO:3 to SEQ ID NO:6 and in Figure 2B)--.

On page 19, lines 18 and 25, after "Figure 2A" insert --(SEQ ID NO:1)--.

On page 19, line 26, after "Figure 2A" insert --(SEQ ID NO:1 or SEQ ID NO:2)--.

On page 20, line 7, after "Figure 2A" insert --(SEQ ID NO:1)--.

On page 20, line 12, after "Figure 2B" insert --(SEQ ID NOs:3 to 6)--.

On page 22, lines 12, 17, and 26, after "Figure 2A" insert --(SEQ ID NO:1)--.

On page 23, line 4, after "Figure 2A" insert --(SEQ ID NO:1)--.

On page 45, line 11, after "Figure 2A represents" insert --SEQ ID NO:1 includes--.

On page 53, line 26, after "Figure 2B" insert --(SEQ ID NO:4 and SEQ ID NO:5)--.

In the claims:

In claim 23, replace "21" with --20--.

In claim 24, please replace "22" with --36--

Please amend claim 1 under the provisions of 37 C.F.R. § 1.121(b) by deleting the bracketed material and inserting the underlined material as follows:

1. (Amended) [A] An isolated FADD protein characterized by having the ability to bind the cytoplasmic region of a Fas receptor.

Please add new claims 31 to 36, as follows:

31. (New) A non-naturally occurring FADD protein characterized by having the ability to bind the cytoplasmic region of a Fas receptor.

32. (New) A polypeptide fragment of the protein of claim 31.

33. (New) The polypeptide of claim 31, wherein the polypeptide consists of at least the C-terminal portion of the protein.

34. (New) The polypeptide of claim 31 wherein the polypeptide consists of at least the N-terminal portion of the protein.

35. (New) The polypeptide of claim 32, and characterized by having the ability to induce apoptosis in a suitable cell.

36. (New) A process for chemically synthesizing a non-naturally occurring FADD protein or the polypeptide of claim 31, which comprises providing the amino acid of the

protein or polypeptide to be synthesized and chemically linking the amino acids in an orientation and under suitable conditions so as to produce the protein or polypeptide.

II. REMARKS

Claims 1-30 are pending in this application. Claims 7-19, 21, 22 and 25 to 30 were withdrawn from examination as a result of a restriction requirement. Claims 1-6, 20, 23 and 24 are under examination. In the outstanding Office Action, the disclosure and specification are objected to. Claim 1 stands rejected as allegedly drawn to non-patentable subject matter and claims 1, 2, 4, 5, 6, 20, 23 and 24 stand rejected under 35 U.S.C. § 112, first and second paragraphs. Claims 1 through 6 and 20 stand rejected under 35 U.S.C. § 103.

By this paper, the specification and claims have been amended. Support for the amendments to the specification can be found in the Figures as originally filed and in the Sequence Identification Listings filed on March 11, 1996. Support for the amendment to claim 1 can be found, for example, on page 13, line 22 to 25. Support for the amendment to claims 23 and 24 can be found on page 17. Support for new claim 31 through 36 can be found, for example, on page 9, lines 16 to 24 and in Example XI which describes non-naturally occurring FADD muteins FADDmt and AU1-N-FADD. No new matter is added as a result of these amendments, and entry thereof is respectfully requested. Amended claims 1 to 6, 20, 23, 24 and newly added claims 31 to 36 are presently under examination.

In view of the preceding amendments and the remarks that follow, reconsideration and withdrawal of the objections to the specification and the rejection of the claims are respectfully requested.

Informalities

The disclosure is objected to because the Brief Description of the Drawings is allegedly not to recite SEQ ID NOs identifying the sequences shown in Figures 2A and 2B. In addition, it

is asserted that the application fails to comply with the requirements of 37 C.F.R. § 1.821 to 1.825 and the specification contains a number of separate sequences encoding or representing peptides that refer to the sequence in Figure 2A.

To help resolve these issues, Applicants would like to clarify the status of the documents previously submitted in this case. The Office Action states that amendments filed on 22 February 1996 were entered. However, Applicants have no record of amendments submitted on that date. On February 5, 1996, the Office acknowledged receipt of an Information Disclosure Statement, a PTO-1449 and accompanying references. On March 11, 1996, the Patent Office received a "Statement to Support Filing and Submission in Accordance with C.F.R. Sec. 1.821-1.825" along with a "Response to Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence Disclosure" and a diskette containing the SEQ ID listings. The response corrected three sequence listings inadvertently omitted and provided substitute listings.

With respect to the references in the specification to nucleotide and amino acid sequences, Applicants have herein amended their specification to identify these sequences by their SEQ ID NO identifier in the proper format. The specification fully complies with 37 C.F.R. § 1.821-1.825 and the informalities have all been corrected.

Restriction Requirement

The Examiner has required restriction to one of the following allegedly independent and distinct inventions under 35 U.S.C. § 121:

Group I: Claims 1-6, 21, 23 and 24, drawn to proteins and polypeptide fragments;

Group II: Claims 7-14, 20 and 22, drawn to nucleic acids, compositions containing nucleic acids, and processes for making FADD protein and chemically replicating nucleic acid molecules.

Group III: Claims 15, 16, and 19 drawn to antibodies, nucleic acids encoding antibodies and hybridomas.

Group IV: Claims 17 and 18, drawn to an agent which has the ability to inhibit binding and an agent that inhibits Fas-associated apoptotic cell death.

Group V: Claim 21, drawn to a process for chemical synthesis of a FADD protein.

Groups VIa/VIb: Claims 25 and 26, drawn to a method modulating cellular function.

Group VII: Claim 27, drawn to a method of modulating cellular function.

Group VIII: Claim 28, drawn to a method of maintaining T-cell viability.

Group IX: Claims 29 and 30, drawn to assay methods for screening an agent.

The Office states that the inventions are distinct and require an election of one of the Groups. During a telephone conference on June 7, 1996, Applicants' undersigned attorney made a provisional election of Group I (claims 1-6, 21, 23 and 24) with traverse. Applicants herein confirm the election of Group I with traverse. Applicants expressly reserve the right under 35 U.S.C. § 121 to file one or more divisional applications directed to the nonelected subject matter during the pendency of this application.

Applicants respectfully request that the Examiner reconsider and withdrawn the requirement for restriction as between Groups I (claims 1-6, 21, 23 and 24), Group IV (claims 17 and 18), Group V (claim 21) and Group IX (claims 29 and 30), and examine these claims in this case.

A restriction requirement is proper only if the Office shows that two criteria have been satisfied: (1) the inventions must be independent and distinct and (2) there must be serious burden imposed on the Examiner if restriction is not required. (MPEP § 808). Therefore, the Examiner must examiner the subject application on its merits, even though it includes claims to distinct invention, if the search and examination of the application can be made without serious burden.

Applicants submit that it would not impart a serious burden on the Examiner to examiner Groups I, IV, V and IX together. Group I is directed to FADD proteins; Group IV to agents which inhibit FADD protein binding; Group V to a process of synthesizing FADD proteins and

Group IX to methods of screening for agents which modulate cellular function using a FADD protein. All of the inventions of these Groups, therefore, involve a search of the art for FADD proteins, and a search for these proteins would certainly reveal inhibitory agents, methods of synthesis and methods of screening. Thus, it would not impart a serious burden on the Examiner to search these Groups together.

The Examiner states that Group I (claims 1-6, 21, 23 and 24) and V (claim 21) are patentably distinct between the product of Group I is made by a materially different method of producing the protein. Similarly, Group I is alleged to be distinct from about IV because the inhibitory agents could be used for a materially different purpose. Applicants respectfully point out that claim 21 has been already classified by the Examiner as belonging to either Group I or Group V, and both Groups share the same classification, class 530. Furthermore, Groups I and IV are related in that the invention of Group IV requires use of a FADD protein to determine inhibition, and, accordingly, depends on claim 1 of Group I. In view of the close interrelatedness of the claimed inventions, it would not impart a serious burden on the Examiner to search and examiner the inventions of Group I, IV and V together, especially in view of the double classification of Group V by itself or with Group I. (See, Office Action, page 3, line 3 and page 7, line 20).

The inventions of Group IX (claims 29 and 30) and Group I (claims 1-6, 21, 23 and 24) are alleged to be unconnected in design, operation and effect. Applicants submit that Group IX requires the use of a detectably labeled FADD protein and are thus, at the very least, related in design. Groups IV and V are similarly related to Group IX as synthesized FADD proteins and use of these proteins.

Applicants maintain, therefore, that the neither criteria of MPEP § 808 has been met with respect to Groups I, IV, V and IX. In particular, the inventions of these Groups are not independent and distinct nor would it impart a serious burden on the Examiner to search these Groups together. Accordingly, the restriction requirement as between Groups I, IV, V and IX is improper, and Applicants request that it be withdrawn.

35 U.S.C. § 101

Claim 1 stands rejected under 35 U.S.C. § 101 as allegedly encompassing products of nature. Without conceding the correctness of the Examiner's position, Applicants have amended claim 1 to specify that the protein is "an isolated FADD protein." Support for this amendment can be found on page 13, lines 22 to 25. New claim 31 specifies that the FADD protein is not naturally occurring. Thus, in view of these amendments, this rejection has been obviated.

35 U.S.C. § 112, First Paragraph

Claims 1 to 6, 20, 23 and 24 stand rejected under 35 U.S.C. § 112, first paragraph as allegedly not enabled by the specification. In particular, it is alleged that disclosure is enabling only for the Fas-associated death domain (FADD) proteins identified in SEQ ID NO:2. It is alleged that the specification does not provide a physical description of each protein capable of functioning as the claimed protein.

Under 35 U.S.C. § 112, first paragraph, the specification must teach one of skill in the art how to make and use the claimed invention. *In re Wright*, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993). Not everything necessary to practice the invention need be disclosed. In fact, what is well-known in the art is preferably omitted from the specification. Cf. *Hybritech Inc., v. Monoclonal Antibodies, Inc.*, 231 USPQ 81, 94 (Fed. Cir. 1986), *cert. denied*, 480 U.S. 947 (1987).

Applicants submit that the specification fully enables claims 1 to 6, 20, 23, 24 and 31 to 36. Claim 1 has been amended herein to recite "an isolated FADD protein." Independent claims 6 and 20 also specify the claimed protein is a FADD protein or polypeptide. Claim 31 recites a non-naturally occurring FADD protein. Thus, the specification must teach a skilled artisan how to make and use a FADD protein.

The specification defines FADD in both structural and functional terms. FADD proteins are characterized as having biological or functional ability to modulate cellular function

associated with the Fas receptor pathway, including apoptosis. (See, page 13, lines 22 to 25.) On page 14, line 29 to page 15, line 7, the specification defines purified FADD as a 208 amino acid molecule with an apparent molecular weight of about 23.3 kD and as having a "death domain" sequence shown in SEQ ID NO:1. Thus, the specification provides a clear physical description of the claimed molecules, and a skilled artisan could, therefore, readily make and use the claimed FADD proteins. Withdrawal of this rejection is requested.

Claims 3 to 5 also stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly not enabled by the specification. The Office asserts that the specification does not provide adequate guidance to make and use the claimed polypeptide fragments. Claim 3 is drawn to a fragment of the FADD protein, claim 4 is directed to a polypeptide which includes the C-terminal portion of FADD and claim 5 is drawn to the N-terminal portion of a FADD protein which induces apoptosis in a suitable cell. Similar claims have been added for non-naturally occurring FADD polypeptides (See claims 32–35).

Applicants submit that the specification provides ample guidance on how to make and use the polypeptides of claims 3 to 5 and 32 to 35. On page 15, line 7 through page 16, line 16, Applicants' specification teaches how several different fragments of FADD can be used. Moreover, on page 16, line 28 through page 17, line 29, the specification describes how FADD fragments can be made, using methods well-known in the art. Exemplary amino acid sequences are provided throughout the specification. Furthermore, on page 50, lines 9–14, Applicants demonstrate how N-terminal and C-terminal FADD fragments were actually made and how they function. The C-terminal fragment of claim 4 is described in detail, for instance, on page 50, lines 11 to 14 and the N-terminal fragment of claim 5 is described on page 53, lines 1 to 18. Thus, armed with the subject specification, a skilled artisan could readily make and use fragments of the FADD protein, including a C-terminal fragment and an N-terminal fragment. Accordingly, the specification fully enables claims 3 to 5 and 32–35, and Applicants' respectfully request withdrawal of the outstanding § 112, first paragraph rejection.

35 U.S.C. § 112, Second Paragraph

Claim 24 stands rejected under 35 U.S.C. § 112, second paragraph as allegedly indefinite for reciting a protein or polypeptide produced by claim 22 which is directed to a process of producing nucleic acids. By amendment herein, claim 24 has been amended to recite a nucleic acid produced by the process of claim 36. Support for this amendment can be found on page 21, lines 4 to 11. Therefore, this rejection has been rendered moot and Applicants request that it be withdrawn.

35 U.S.C. § 103

Claims 1 to 6 and 20 stand rejected under 35 U.S.C. § 103 as allegedly obvious over Itoh *et al.* (1983) in view of Maekawa *et al.* (1991) and in further view of Morrison *et al.* (1989). The Examiner alleges that Itoh teaches the amino acids of the cytoplasmic region of the Fas antigen responsible for apoptosis, known as the death domain, but does not teach a purified mammalian polypeptide or fragment capable of inducing apoptosis. Maekawa is cited for teaching the cloning and expression of a protein that binds the cytoplasmic region of a Fas antigen (PTP-BAS). Morrison is cited as teaching the purification of a protein that binds to the cytoplasmic regions of tyrosine kinase receptors, including the Fas receptor. It is alleged that it would have been obvious to one of skill in the art to use the method of Morrison to purify Maekawa's protein and that Maekawa's protein could be expressed in a host cell using the method of Itoh.

Applicants strongly disagree that the present invention is rendered obvious by the combination of the cited references. Pursuant to 35 U.S.C. § 103, the cited references must teach or suggest each element of the claimed invention. Indeed, the public policy of the patent system, articulated in the last sentence of § 103, serves to prevent serendipitous discoveries from receiving preference over careful, methodical research and development strategies by not allowing rejections based on "an obvious to try" standard. *In re Lindell*, 155 USPQ 521, 523 (CCPA 1967). Thus, it is improper to reject claims to specific molecules based on an alleged

obviousness of a method of making the molecules. *In re Deuel*, 34 USPQ2d 1210 (Fed. Cir. 1995).

In *Deuel*, the PTO rejected claims to specific cDNA sequences and nucleotide sequence covering heparin-binding growth factor based on references which disclosed the N-terminal portion of a brain-specific heparin binding growth factor and a reference describing a general method for gene cloning once partial amino acid sequence was known. The Federal Circuit reversed this rejection, holding that a general motivation to search for a gene known to exist but not defined in combination with a general method of probing for such a gene does not make obvious a specifically-defined gene that is subsequently obtained. *Id.* at 1216. Therefore, because the references cited in *Deuel* did not teach or suggest the specific claimed molecules, a rejection based on § 103 was improper.

The facts of the pending application are analogous to those in *Deuel*. As acknowledged by the Examiner, the cited references do not teach or suggest the claimed sequences. Thus, as in *Deuel*, the Office is attempting to show obviousness of the specifically claimed sequences by relying on general methods (Morrison and Itoh), a partial C-terminus amino acid sequence of a distinct protein (Maekawa) and a protein which binds to the claimed molecules (Itoh). The court in *Deuel* clearly held that the teachings of such references cannot establish a *prima facie* case of obviousness. Applicants request withdrawal of this rejection.

Initialled PTO Forms 1449

Applicants acknowledge receipt of the Examiner-initialled PTO 1449 Forms filed with the Information Disclosure Statement received by the Office on February 5, 1996.

Drawings Objection

Applicants also acknowledge receipt of the PTO 948 Form enclosed with the outstanding Office Action. Drawings corrected to overcome the alleged informalities will be filed prior to the payment of the issue fee.

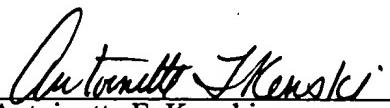
III. CONCLUSION

If a telephone interview would be of assistance in advancing prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided below.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952 (Ref. No. 20344-21070.20)**. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: January 17, 1997.

Respectfully submitted,

By: 
Antoinette F. Konski
Registration No. 34,202

Morrison & Foerster LLP
755 Page Mill Road
Palo Alto, California 94304-1018
Telephone: (415) 813-5730
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